Department of Biology Education

Stockholm University

Syllabus

for course at first level

Genetics of Populations
Naturliga populationers genetik

15.0 Higher Education Credits
15.0 ECTS credits

Course code:	BL5002
Valid from:	Autumn 2007
Date of approval:	2006-07-24
Department	Department of Biology Education
Subject	Biology

Decision

This syllabus has been approved by the Board of the Faculty of Science at Stockholm University.

Prerequisites and special admittance requirements

Admittance to the course requires knowledge equivalent to Cell and Molecular Biology 15 credits, Diversity and Phylogeny of Organisms 15 credits, Physiology 15 credits and Ecology, Floristics and Faunistics 15 credits. (Three credits corresponds to approximately two weeks full-time studies).

Course structure

Examination code	Name	Higher Education Credits
5002	Genetics of Populations	15

Course content

The course covers population genetics, evolutionary genetics, quantitative genetics, and conservation genetics. The course content covers areas of genetics of fundamental importance for ecology, evolutionary biology, molecular ecology, conservation biology, population biology, and ethology.

Learning outcomes

It is expected that the student after taking the course will be able to:
• demonstrate basic knowledge on, and understand, the stochastic and deterministic processes that forms and changes the genetic composition of populations.
• show a certain capability of the kind of genetic methods used in population genetics, evolutionary genetics, conservation genetics, and for the analysis of quantitative characters.
• account for the meaning of basic concepts concerning the genetics of populations.
• show a certain capability for managing genetic data including statistical analysis and interpretation, and presentation of results.
• exemplify the significance of genetics for research in ecology, population biology, evolutionary biology, and conservation biology, as well as for management of natural resources.

Education

The education consists of lectures, laboratory exercises, calculation exercises, seminars and project work. Participation in laboratory exercises, calculation exercises, seminars and project work and group education associated with this is compulsory. An examiner may rule that a student is not obliged to participate in certain compulsory education if there are special grounds for this after consultation with the relevant teacher.

Forms of examination

a. Examination for the course is in the following manner: measurement of knowledge takes place through: Written and/or oral examination

b. Grading is carried out according to a 7-point scale related to learning objectives:
A = Excellent
B = Very Good
C = Good
D = Satisfactory
E = Sufficient
Fx = Fail
F = Fail

c. Grading criteria for the course will be distributed at the start of the course.

d. A minimum grade of E is required to pass the course, together with:
•approved laboratory exercises
•approved written and oral presentations
•participation in all compulsory education

e. Students who fail to achieve a pass grade in an ordinary examination have the right to take at least further four examinations, as long as the course is given. The term "examination" here is used to denote also other compulsory elements of the course. Students who have achieved a pass grade on an examination may not retake this examination in order to attempt to achieve a higher grade. Students who have failed to reach a pass grade on two occasions have the right to request that a different teacher be appointed to set the grade of the course. A request for such appointment must be sent to the departmental board.

Interim

Students may request that the examination is carried out in accordance with this syllabus even after it has ceased to apply. This right is limited, however, to a maximum of three occasions during a two-year-period after the end of giving the course. A request for such examination must be sent to the departmental board.

Limitations

The course can not be included in a degree together with the course Population Genetics and Conservation Biology 10 p (BI3530) or the equivalent.

Misc

The course is a component of the Bachelor's Programme in Biology and of the Bachelor's Programme in Biomathematics, and it can also be taken as an individual course.

Required reading

Course literature is decided by the departmental board and is described in an appendix to the syllabus.